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WHAT IS CLAIMED IS:

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1. A capacitor element configured to mount a semiconductor element thereon, said capacitor element comprising:

10           a base; and  
            a capacitor part provided on said base,  
            wherein said base is made of a resin whose  
coefficient of linear expansion is adjusted in accordance  
with a coefficient of linear expansion of the  
semiconductor element.

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2. The capacitor element as claimed in claim 1,  
20   wherein the capacitor part includes two opposing  
electrodes and a dielectric layer interposed therebetween.

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3. The capacitor element as claimed in claim 1,  
wherein the base is made of an epoxy resin including a  
filler for adjusting a coefficient of linear expansion of  
the epoxy resin to fall within a range of 5-30 ppm/K.

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4. The capacitor element as claimed in claim 1, wherein the base is made of a polyimide resin including a filler for adjusting a coefficient of linear expansion of the polyimide resin to fall within a range of 5-30 ppm/K.

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5. The capacitor element as claimed in claim 1, wherein the base is made of a thermoplastic liquid crystal polymer whose coefficient of linear expansion is within a range of 5-30 ppm/K.

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6. The capacitor element as claimed in claim 1, wherein the base is made of a resin including aramid fiber for adjusting a coefficient of linear expansion of the resin to fall within a range of 5-30 ppm/K.

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7. The capacitor element as claimed in claim 1, wherein the base is made of a resin whose coefficient of linear expansion is within a range of 5-30 ppm/K.

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8. In combination, the capacitor element as claimed in claim 1, and a semiconductor element mounted on

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the capacitor element.

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9. A method of manufacturing a capacitor element, comprising the steps of:

applying on a surface of a base material a base made of a resin whose coefficient of linear expansion is  
10 adjusted in accordance with a coefficient of linear expansion of a semiconductor element mounted on said capacitor element;

forming vias in the base;  
forming a conductive layer on a top surface of  
15 the base;

patterning the conductive layer so as to form terminals filling in the vias and lower electrodes extending to the top surface of the base;

forming a dielectric layer on said lower  
20 electrodes;

forming a conductive layer on a top surface of the dielectric layer; and

patterning the conductive layer so as to form on the dielectric layer an upper electrode opposing said  
25 lower electrodes and so as to form a terminal having an exposed top surface.

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10. The method as claimed in claim 9, further comprising the step of releasing the base material to thereby form the capacitor element.

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5           11. A semiconductor device substrate on which a  
semiconductor element may be mounted, said semiconductor  
device substrate comprising:  
          a substrate body having a bottom surface that  
serves as a mounting surface in which external connection  
10 terminals are arranged; and  
          a capacitor element including:  
          a base made of a resin whose coefficient of  
linear expansion is adjusted in accordance with the  
semiconductor element to be mounted;  
15           a capacitor part including two opposing  
electrodes and a dielectric layer interposed therebetween;  
          a plurality of terminals in a top surface  
of the capacitor element; and  
          a plurality of terminals in a bottom  
20 surface of the capacitor element,  
          the capacitor element being embedded in the  
substrate body, a top surface of the capacitor element  
being exposed at a top surface of the substrate body and  
serving as a surface on which the semiconductor element  
25 may be mounted.

30           12. A semiconductor device, comprising:  
a semiconductor device substrate as claimed in  
claim 11; and  
a semiconductor element,

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the semiconductor element being mounted on a top surface of the semiconductor device substrate at which the capacitor element is exposed.